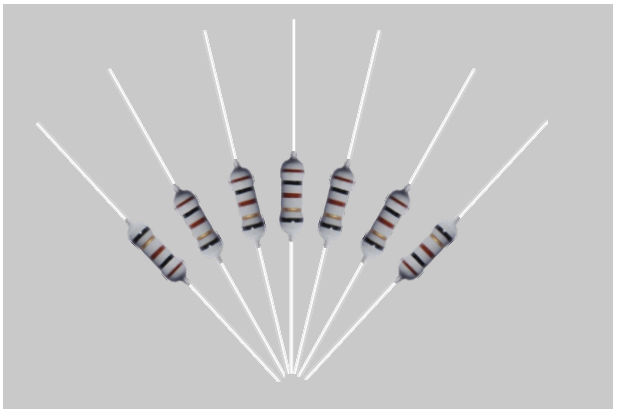
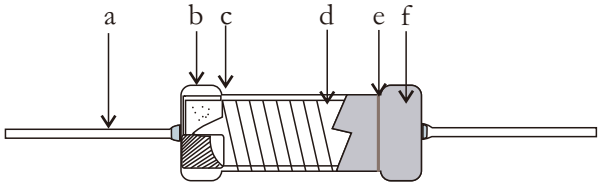


Features

Ⅰ Flameproof and insulating coating designed to assure safe using by special non-flammable silicon-base.(Eqyuvakebt to UL94V-0)
Ⅱ Good heat-durability, low temperature coefficient , low noise, high overload power
Ⅲ High stability , long life
Ⅳ Products meet Eu-RoHS.

Construction



a	Lead wire
b	Cap
c	Ceramic base
d	Wire wound
e	Marking or color code
f	Insulation coat

Ordering Information

Example:

KNP	14	J	R100	S1
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	Resistance	Style

(1)Type: KNP SERIES

(2)Power Rating: 14=1/4W、12=1/2W、1=1W、2=2W、3=3W,…

(3)Tolerance: F=±1%, J=±5%

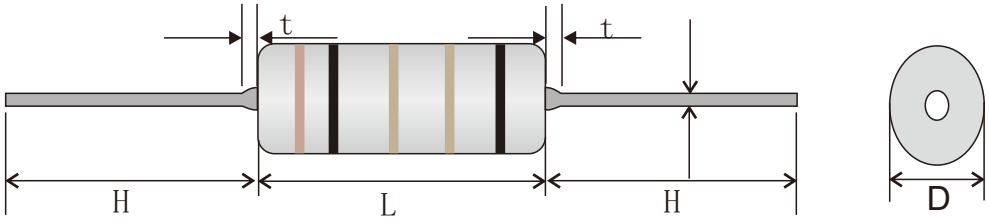
(4)Resistance Value:R100=0.1R、1R00=1Ω、10R0=10Ω、100R0=100Ω

(5)Style: S1=Standard, S2=Small volume

Reference Standards

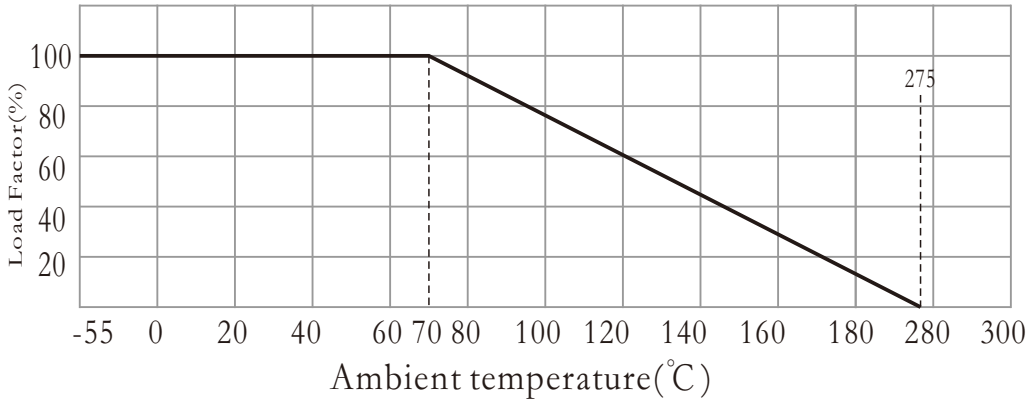
JIS C 5201-1

Dimensions, Applications And Ratings

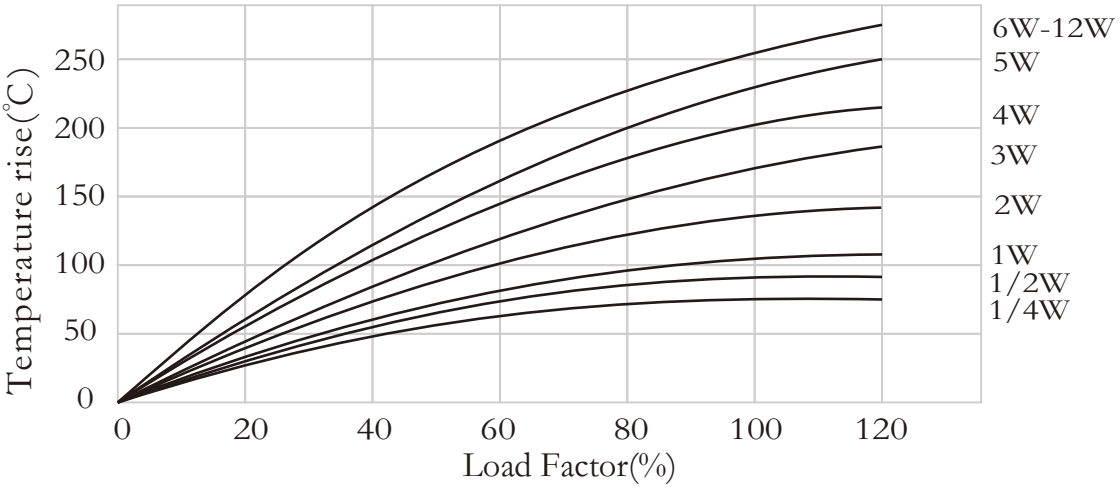


Type	Power	Resistance Range(Ω)	Dimensions(mm)					Max working Voltage	Dielectric with standing	T.C.R
			L±1	t max	D±0.5	H±3	d±0.05			
KNP14	1/4W	0.05~1KΩ	6.5	1.5	2.50	28.0	0.60	√PR	300V	
KNP12S	1/2WS									
KNP12	1/2W	0.05~2KΩ	9.0	2.0	3.50	28.0	0.60	√PR	350V	
KNP01S	1WS									
KNP01	1W	0.05~3KΩ	11.0	2.5	4.00	28.0	0.70	√PR	500V	
KNP02S	2WS									
KNP02	2W	0.05~5KΩ	16.0	2.5	5.0	33.0	0.70	√PR	500V	
KNP03S	3WS									
KNP03	3W	0.05~5KΩ	18.0	2.5	6.0	33.0	0.70	√PR	700V	⩾10Ω ±200PPM/℃
KNP04S	4WS									
KNP04	4W	0.05~10KΩ	18.0	2.5	6.0	33.0	0.70	√PR	700V	
KNP05S	5WS									
KNP05	5W	0.05~15KΩ	19.0	2.5	7.0	33.0	0.75	√PR	700V	1~9.9Ω ±100PPM/℃
KNP06S	6WS									
KNP06	6W	0.05~33KΩ	22.0	2.5	7.50	33.0	0.75	√PR	700V	
KNP07S	7WS									0.1~0.99Ω ±100PPM/℃
KNP07	7W	0.05~33KΩ	25.0	2.5	8.0	33.0	0.75	√PR	700V	
KNP08S	8WS									
KNP08	8W	0.05~33KΩ	32.0	2.5	8.0	33.0	0.75	√PR	700V	0.05~0.099Ω ±300PPM/℃
KNP09S	9WS									
KNP09	9W	0.05~33KΩ	36.0	2.5	8.5	33.0	0.75	√PR	700V	0.01~0.049Ω ±300PPM/℃
KNP10S	10WS									
KNP10	10W	0.05~33KΩ	36.0	2.5	8.5	33.0	0.75	√PR	700V	
KNP12S	12WS									
KNP12	12W	0.1~33KΩ	42.0	2.5	9.0	33.0	0.80	√PR	700V	
KNP15S	15WS									
KNP15	15W	0.1~33KΩ	52.0	3.0	9.0	33.0	0.80	√PR	700V	
KNP18S	18WS									
KNP18	18W	0.1~33KΩ	62.0	3.0	9.0	33.0	0.80	√PR	700V	
KNP20S	20WS									
KNP20	20W	0.1~33KΩ	66.0	3.0	9.0	33.0	0.80	√PR	700V	
KNP25S	25WS									
KNP25	25W	0.1~50KΩ	76.0	3.0	9.0	33.0	0.80	√PR	700V	
KNP30	30WS									
KNP30	30W	0.1~100KΩ	95.0	3.0	12.0	33.0	1.0	√PR	700V	
KNP35S	35WS									
KNP35	35W	0.1~100KΩ	95.0	3.0	12.0	33.0	1.0	√PR	700V	
KNP40S	40WS									
KNP40	40W	0.1~100KΩ	112.0	3.0	12.0	33.0	1.0	√PR	700V	
KNP45S	45WS									

Derating Curve



Surface Temperature Rise



Performance

Test Items	Performance Requirements	Test Methods(JIS C 5201-1)
Resistance	Within specified tolerance	Measuring points are 10mm from the end cap
T.C.R.	Within specified T.C.R	Room temperature+100℃
Short time overload	±(1%R+0.05Ω)	10 times the rated power for 5 seconds
Load life	±(5%R+0.1Ω)	Rated voltage at 70℃ for 1,000 hours 1.5hr ON/0.5hr OFF Cycles
Load life in humidity	±(5%R+0.1Ω)	Rated voltage at 40℃,95%RH for 1,000 hours
Moisture resistance	±(1%R+0.05Ω)	40℃,95%RH for 240 hours
Temperature cycle	±(1%R+0.05Ω)	5 cycles for -25℃(30min);room temp.(30min) ~+85℃(30min)room temp.(30min)
Solderability	95%(min)coverage	Temp. of solder 245℃ ± 5℃ duration of immersion3s ± 0.5s
Resistance to soldering heat	±(1%R+0.05Ω)	260℃ ± 5℃ for 10 seconds 350℃ ± 10℃ for 3.5 seconds
Insulation resistance	> 1,000MΩ	500V insulation test 1min.
Flameproof	No obvious flaming or arcing	AC voltage of 2,4,6,8,16,32 times the power rating for 1min.(V ≤4times max, working voltage)